

The Frequency of Lymphogranuloma Venereum in Persons with Perirectal Abscesses, Fistulae in Ano, or Both

With Particular Reference to the Relationship between Perirectal Abscesses
of Lymphogranuloma Origin in the Male and Inversion

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Altogether 94 patients with perirectal abscesses and/or fistulae in ano were tested for lymphogranuloma venereum in a Washington, D.C., clinic. They included men and women of low socio-economic status, many of the men being overt psycho-sexual hermaphrodites. The findings were compared with those in a control group of similar sex distribution (females, male homosexuals, male heterosexuals). All persons in the study were tested for lymphogranuloma venereum by the complement-fixation and Frei tests. Homosexuals and persons with rectal lesions were also examined by proctoscopy.

Among other findings, a significantly higher frequency of Frei reactors or positive complement-fixation reactions was observed among patients (both male and female) with abscesses than among the controls and among male homosexuals than heterosexuals.

The author concludes that lymphogranuloma venereum should be excluded in the differential diagnosis of perirectal abscess and fistula in ano, that homosexuals should be routinely tested for lymphogranuloma venereum, and that sexual perversion should be considered in male patients with ano-rectal disease of lymphogranuloma venereum origin.

The subject of perirectal abscess should elicit more than passing interest because of its tendency to recur, its chronicity resulting in ano-rectal crippling, and its not infrequent association with carcinoma (Dukes & Galvin, 1956; Wright, 1958). While proctitis and rectal strictures are generally accepted as clinical entities of lymphogranuloma venereum, perirectal abscesses are usually ascribed to a variety of organisms (Paulson, 1952), among them the tubercle bacillus (Kaufman, 1952). The presence of the virus of lymphogranuloma venereum has been demonstrated in pus exuding from a fistula in ano in a Frei reactor (Nicolas et al., 1932). This investigation has been corroborated by other research scientists (Wein & Perlstein; quoted by Paulson, 1939). Attention has been directed to the fact that the virus of lymphogranuloma venereum may produce symptoms of perirectal abscess (Greenblatt, 1953). However,

these rectal lesions are viewed essentially from a surgical approach without cognizance of their possible association with a venereal disease or the manner of their transmission. Even when cultures are made from rectal discharge, that does not exclude the possibility of the presence of the virus of lymphogranuloma venereum, which requires more sophisticated laboratory techniques for its identification and recognition (Wall, 1946).

Dermal sensitivity to Frei antigen or the presence of complement-fixing antibodies for lymphogranuloma venereum in serum is only indicative of past or present infection with the virus of lymphogranuloma venereum or one of the psittacosis/lymphogranuloma-venereum group (Kilham, 1948; Hilleman et al., 1958). Recovery of the virus is impracticable in clinical investigation because of the necessity for elaborate and tedious techniques including the use of embryonated eggs and susceptible laboratory animals (Wall, 1946). In addition, as previously mentioned, there are many other causes of perirectal

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abscess. Therefore, while it is the purpose of this communication to report on the frequency of lymphogranuloma venereum in persons with perirectal abscesses, fistulae in ano, or both, and to show the possible relationship of these lesions in the male to inversion, the evidence must necessarily be indirect and of an ancillary nature.

MATERIALS AND METHODS

Patients attending the Polk Health Center (now the Northwest Central Clinic), Washington, D.C., were examined for perirectal abscess or fistula in ano or evidence of their having had these lesions by history and scarring or puckering of the perianal area through surgical intervention or spontaneous rupture. They included male and female persons of low socio-economic status. Among the males were many psycho-sexual hermaphrodites, most of them overt, anal, and primarily accustomed to the passive role in coitus; these were partial or complete transvestites, were frequently the designated homosexual contacts of other venereal disease patients, and freely admitted their paraphilia. A decided narcissistic component was present in most of them and identification with the female sex was sought by covering draining fistulae with sanitary napkins or suppressing well developed external genitalia with tightly fitting undergarments. This aggregation of patients with abscesses soon formed a pattern and divided itself into three groups: heterosexual male, homosexual male, and female patients. Because of this distribution the controls were selected in analogous groupings from persons with a sexual exposure rate reasonably similar to that of the symptomatic group. In addition, such factors as age, occupation, and sociological status were correlated among the sub-categories of each aggregate to assure a more impartial basis for comparison. While one must recognize the difficulty in selecting humans as controls because of the variability of sociological factors and sexual patterns, both groups were as comparable as could possibly be achieved. All patients were tested for dermal sensitivity to Frei antigen and their sera were examined for complement-fixing antibodies for lymphogranuloma venereum in addition to the usual diagnostic procedures for other venereal disease whenever indicated. Those presenting perianal lesions and homosexuals were subjected to proctoscopy wherever practicable.

Frei test

Intradermal injections of 0.1 ml of Lygranum ST and control antigens prepared by E. R. Squibb &

Sons were made and the tests were read two days later (Greaves & Taggart, 1953). A papule of at least 6×6 mm in the principal diameters was regarded as positive provided that of the control was 5×5 mm or smaller.

Complement-fixation test

The complement-fixation test for lymphogranuloma venereum used was a modification of a standard test employed in the laboratory of the Walter Reed Army Institute of Research; this has been described by Greaves et al. (1957).

FINDINGS

The specificity of the Frei test (Shaffer et al., 1942; Bedson et al., 1949) and the value of the complement-fixation test (Hilleman, 1950) for lymphogranuloma venereum have been clearly established. Correlation between both diagnostic tools is essential because anergy to Frei testing may occasionally occur (Shaffer & Rake, 1947). In Table 1 the frequency of positive laboratory findings for lymphogranuloma venereum in patients with perirectal abscesses or fistulae in ano, or both, compared with a control group is illustrated. Of a total number of 94 patients with this disease there were 46 female and 48 male patients; 23 of the latter were overt psycho-sexual hermaphrodites. The control group comprised 285 patients with a distribution of 102 females, 105 heterosexual males, and 78 male deviates. These patients were selected as previously described, in an attempt not only to simulate the sex distribution of the group with abscesses (i.e., female, male heterosexual, and overt male homosexual), but also to afford an equitable comparison between both groups. Of the 94 patients with abscesses, 56 exhibited dermal sensitivity to Frei antigen; in 38 no response was elicited. Among the control group of 285 patients, 91 were Frei reactors and 194 were negative.

The data were subjected to statistical evaluation for significance by using the χ^2 formula in which a value of 3.8 is significant. χ^2 was computed to be 21.6, indicating that it was extremely significant that patients with perirectal abscesses and/or fistulae in ano exhibited a greater incidence of dermal sensitivity to Frei antigen than did the control group. When the incidence of positive Frei tests was contrasted between the two groups of female patients, the χ^2 value was 4.5, or more than significant. In a comparison of skin testing between the male groups¹ of patients the χ^2 value reached a high of 21.8.

¹ Disregarding the subdivision into heterosexual and homosexual males.

TABLE 1
RESULTS OF LABORATORY TESTS FOR LYMPHOGRANULOMA VENEREUM
IN PATIENTS WITH PERIRECTAL ABSCESSSES AND/OR FISTULAE IN ANO

Category tested	Number of persons	Frei test		Complement-fixation test	
		Pos.	Neg.	Pos.	Neg.
Patients with abscesses and/or fistulae					
Males					
Homosexuals	23	18	5	13	10
Heterosexuals	25	18	7	9	16
Subtotal	48	36	12	22	26
Females	46	20	26	23	23
Total	94	56	38	45	49
Control group without abscesses or fistulae					
Males					
Homosexuals	78	43	35	28	50
Heterosexuals	105	23	82	17	88
Subtotal	183	66	117	45	138
Females	102	25	77	18	84
Total	285	91	194	63	222

An investigation of the frequency of reactive complement-fixation tests disclosed that 45 patients with abscesses gave reactive tests and 49 gave non-reactive tests compared with 63 reactive and 222 non-reactive in the controls. A χ^2 value of 21.8 proved that it was of great significance that the serum of patients with perirectal abscesses possessed the property of fixing complement in the presence of lymphogranuloma venereum antigen. Further analysis of the data for a comparison between males and females in both categories (i.e., with and without abscesses, fistulae, or both) revealed χ^2 values of 7.3 and 15.0 respectively.

The role of the homosexual in the spread of venereal disease has been of grave concern to health officials (Larsen, 1959). Homosexuals are known to be highly promiscuous (Nicol, 1960), and while the overt transvestite creates no great problem in his identity, the individual with a bisexual pattern passes unsuspected. Routine Frei tests and complement-fixation tests for lymphogranuloma venereum among overt homosexuals and heterosexuals are compared in Table 1. Of 78 homosexuals selected as controls, 43 were Frei-positive and 35 were negative, contrasted with 23 reactors and 82 non-reactors among the 105 heterosexual male controls. In addition, the sera of 28 of the 78 homosexuals were found to possess complement-fixing antibodies for lymphogranuloma venereum compared with 17 of the 105

heterosexuals. The χ^2 values of 20.1 and 8.3 respectively indicate the high frequency of infection with the virus of lymphogranuloma venereum among homosexuals.

The mode of transmission of ano-rectal lymphogranuloma venereum in the male has been accepted as being direct implantation of the virus on the walls of the rectal mucosa through sodomy (Palmer et al., 1942; Rowe, 1951). The pathogenesis of ano-rectal lymphogranuloma venereum in the female, on the other hand, has been considered as a direct extension of the infection by way of the lymphatic vessels from the vagina to the rectum (Palmer et al., 1942). Undoubtedly, some cases of ano-rectal manifestation of the disease in the female are due to sodomy. However, no attempt was made to investigate this possibility among female patients who are, on the whole, reluctant to reveal their sexual habits and patterns.

Of the 48 male patients found to have perirectal abscesses (Table 1), 23, or 48%, were overt paraphiliacs. By employing the table for binomial distribution it was determined that the percentage of homosexuals would be no less than 33 and no greater than 63. A figure close to the maximum of 63% would appear to be the most accurate since it was impossible to ascertain whether or not there were additional homosexuals among the heterosexual group. A comparison between the frequency of

homosexuality among persons with perirectal abscesses and those in the Washington, D.C., area could not be made. There are many gradients or variants between the individual who has never experienced a homosexual act and the one who has never had a heterosexual partner. Moreover, the very nature of the paraphilia demands secrecy. Of a total of five male patients with rectal strictures, three of whom had colostomies, all five were homosexuals (Kornblith, 1950).

Use of the ano-rectum as a vagina-substitute contributed to an extensive variety of proctological lesions as well as venereal disease. In cases where sodomy had been practised over long periods of time, the anal sphincters lost their muscular tone and portions of the ano-rectum could be visualized without instrumentation. In a few cases, fleshy excrescences simulating labia but unlike lymphorrhoids projected from the anal margins. The frequency of proctological lesions among the 78 invert controls is illustrated in Table 2. Ano-rectal examination was negative (apart from cryptitis and papillitis) in 45 of these patients. A total of 36 ano-rectal conditions was tabulated in the remaining 33 patients, three of whom had a combination of two lesions. Proctitis and perianal condyloma acuminata (Teaharov, 1962) were the most frequently observed infections, occurring in nine and eight instances, respectively. Other venereal disease, rectal strictures, haemorrhoids, and anal fissures were fairly evenly distributed. Two

patients exhibited perianal condyloma lata from which *Treponema pallidum* was isolated; two others disclosed perianal granuloma inguinale, which was confirmed by biopsy; and *Haemophilus ducreyi* was present in autogenous culture and smear from the perianal lesions of a fifth patient. Rectal strictures were discovered in four patients and haemorrhoids were present a similar number of times. Anal fissures were noted in three instances, while perianal intertrigo and lymphorrhoids were the least frequent lesions.

CONCLUSIONS

During the two-year period of observation (1960-61) 762 cases of lymphogranuloma venereum were reported among a total of 24 353 clinic visits at the Northwest Central Clinic compared with 168 cases among 13 181 visits the preceding year. The study illustrates that the prevalence of lymphogranuloma venereum can be measured accurately only when appropriate laboratory tests are performed as a matter of routine rather than in specific instances. It confutes the outmoded concept of the tropical nature of the disease and warns against an ethnological approach which may stifle objectivity and deprive patients of correct diagnosis and treatment. Conversely, the work also betrays the prevalence of oral and anal eroticism and demonstrates how naïve it is to confine examinations for venereal disease to the genitalia. Not infrequently, patients who were originally examined and regarded as asymptomatic but whose sera possessed complement-fixing antibodies for lymphogranuloma venereum were found to have ano-rectal manifestations of this disease on re-examination.

Specifically, our observations indicate, first, that lymphogranuloma venereum should always be excluded in the differential diagnosis of perirectal abscess and fistulae in ano. Secondly, that inverts should be routinely examined and tested for lymphogranuloma venereum because of the high incidence of this disease among them. And, finally, that paraphilia should be suspected in male patients with ano-rectal disease of lymphogranuloma venereum origin.

It is regrettable that lymphogranuloma venereum should be relegated to the rank of a so-called "minor" venereal disease because its true prevalence and complications are far from insignificant.

TABLE 2
FREQUENCY OF PROCTOLOGICAL LESIONS
AMONG 78 HOMOSEXUAL CONTROLS

Lesion observed	Frequency
Asymptomatic	45
Proctitis	9
Condyloma acuminata	8
Other venereal disease	5
Rectal stricture	4
Haemorrhoids	4
Anal fissure	3
Perianal intertrigo	2
Lymphorrhoids	1

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RÉSUMÉ

L'auteur a examiné à la Consultation de vénéréologie de la Northwest Central Clinic de Washington 94 sujets atteints d'abcès périrectal fistulisé ou non. Les malades ont été divisés en trois groupes: femmes (46), hommes hétérosexuels (25) et homosexuels passifs (23). Par ailleurs, des sujets ne présentant pas d'abcès périrectal ont été groupés de la même façon (102 femmes, 105 hommes hétérosexuels et 78 homosexuels passifs). Les uns et les autres ont été soumis à deux épreuves utilisées pour le diagnostic de la lymphogranulomatose vénérienne (maladie de Nicolas et Favre): l'intradermo-réaction de Frei et le test de fixation du complément.

L'analyse statistique des résultats obtenus montre que

les deux épreuves sont beaucoup plus fréquemment positives chez les sujets atteints d'abcès périrectal. Il convient donc, en présence d'un tel abcès de toujours penser à la possibilité d'une lymphogranulomatose vénérienne.

D'autre part, il convient de rechercher chez tout homosexuel passif l'existence d'une lymphogranulomatose vénérienne car celle-ci est statistiquement beaucoup plus fréquente chez les invertis que chez les sujets hétérosexuels.

Enfin, la présence chez un homme de lésions ano-rectales dues à la lymphogranulomatose vénérienne doit faire suspecter l'inversion sexuelle.

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